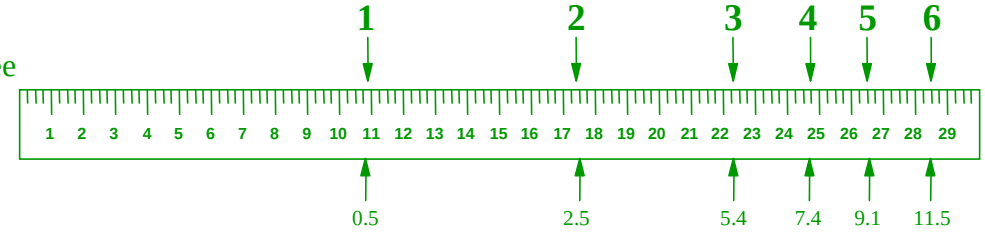
FISHERIES FACT SHEET

Santee Cooper Striped Bass

Miscellaneous Facts

- The Santee Cooper system includes lakes Marion and Moultrie and the headwater rivers, Congaree, Wateree, Lower Broad, and Lower Saluda. This aging system has changed markedly since impoundment in 1941 in ways that appear unfavorable to striped bass. Santee Cooper striped bass are essentially landlocked; they live their entire lives in the lakes and tributary rivers.
- Adult striped bass from the lakes migrate far up Congaree and Wateree rivers in spring to spawn. Eggs and sperm are released into the current, where fertilization occurs. Eggs drift downstream for 2-3 days until hatching into tiny (1/8”), fragile larvae. It is natural for most eggs and larvae to die. To compensate for this mortality, a single large striper may spawn over a million eggs. Water releases from Lake Murray and Lake Wateree dams affect the exact location and timing of spawning and how far eggs drift before hatching. Larvae that hatch in upper Lake Marion have a better chance of survival than those hatching further upstream, in the river.
- Production of naturally spawned striped bass is lower now than in past years. Possible reasons for poor spawning success include fewer spawning adults, changes in water regulations at dams, competition with other fish, such as white perch, poor water quality for larvae, and other factors.
- In Santee Cooper stripers reach 21”, the current legally harvestable length, at about 3 years of age. About half of females will mature and spawn at age 4, or 24”, and by age 5, or 26”, all females will spawn. Average lengths and weights at age are as follows:

Average length and weight at age for Santee Cooper striped bass



- Annual mortality is about 70% per year, which is very high. Anglers harvest or kill at least 40% of the population each year and up to 30% die of natural causes. Very few fish live beyond 5 years, so the fish caught by anglers are relatively small and **most female striped bass don’t live long enough to spawn, even once**.
- Striped bass, especially large fish, are not supposed to tolerate temperatures above 27^{o}C for extended periods. Yet, in these lakes summer water temperatures often reach 28-30^{o}. At such high temperatures, fish can become severely stressed. Because of their weakened condition during the summer months, **about 75% of stripers that are caught and released during the summer will die**. Death usually occurs later, after the fish appears to swim off healthy. At cooler temperatures and with careful handling, stripers can be safely released.

- Some Santee-Cooper striped bass, typically the larger individuals, use the cool waters of the Lower Saluda River during the summer months. Because of deep withdrawal of water from Lake Murray, summer temperatures in Saluda River remain cool and favorable to stripers. Because of the cool summer temperatures, angled stripers can be released with a high probability of long-term survival. Saluda River regularly produces a small number of trophy stripers exceeding 40 pounds. Because the Saluda River is relatively small and in a major urban area of South Carolina, fishing pressure on striped bass can be substantial.

Management

- During the 1970's, spawning success declined sharply, leading to a decline in the population. In an effort to augment the population, stocking began in 1985 and fishing regulations have become more restrictive. The population now consists of about half hatchery and half wild fish.
- Despite management efforts, the number of harvestable-size fish has not increased as hoped and trophy fish are rare. The average size of fish harvested is 5 pounds. Also a problem is that the number of fish produced varies widely between years, and this, combined with the high mortality rate, causes wide annual fluctuations in the population. Continuation of an annual stocking program, which we are continually striving to improve, will help to reduce the variation in annual production of striped bass, especially during years when natural spawning success is poor.
- The primary way to increase the number and size of fish in the population is to reduce fishing mortality, which includes both harvest and hook and release deaths related to high summer water temperatures.

Harvest Regulation Options

Any new harvest regulation should be designed to **1) increase survival of females to maturity**, **2) minimize loss to summer time catch and release mortality**, and **3) prevent over-harvest of over-summering adults in the Lower Saluda River**. Keep in mind that there are many possible variations in options between no change and completely closing the fishery. The more restrictive options will have a greater potential for creating a substantial and more rapid benefit to the striper population.

For Lakes Marion and Moultrie, Congaree, Broad, Wateree, Santee, and Cooper Rivers:

Option 1: Oct 1 – May 31: 2 stripers per day, minimum length 26", with catch & careful release allowed.
June 1 – Sept 30: Closed season. No targeted catch & release fishing allowed.

Option 2: Sept 16 – June 14: 2 stripers per day, minimum length 26", with catch & careful release allowed.
June 15 – Sept 15: Closed season. No targeted catch & release fishing allowed.

Option 3: Sept 16 – June 14: 2 stripers per day, minimum length 24", with catch & careful release allowed.
June 15 – Sept 15: 1 striper per day, no minimum size. No catch & release fishing

Option 4: Oct 1 – May 31: 2 stripers per day, minimum length 26", with catch & careful release allowed.
June 1 – Sept 30: The first 2 stripers caught, no minimum size, and striper angling must cease for the day (no catch and release fishing allowed).

For Lower Saluda River – manage for quality fish and brood stock protection

Option 1: 1 striper per day, minimum length 28", with catch & careful release allowed.

Option 2: 1 striper per day, minimum length 26", with catch & careful release allowed.

Option 3: 2 stripers per day, minimum length 26", with catch & careful release allowed.

Option 4: No harvest. Catch & careful release allowed.

Expected benefits:

- **the fishing mortality on the Santee-Cooper striped bass population will be reduced, increasing the average size and the catch rate of striped bass,**
- **the number of mature females in the population will increase and the potential for sustained natural production will increase,**
- **and a quality fishery in Lower Saluda River will be protected and developed.**

Similar harvest restrictions have been used elsewhere to successfully bring back failing striped bass populations. Though difficult to compare the systems, the underlying lesson is that increasing the number of reproducing females and increasing the number of different year classes of females spawning in a given year, greatly enhances the chances of producing strong natural reproduction and recruitment.

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